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Canada, Railways, Canals and
Telegraph Lines, Standing Committee, 1952

SESSION 1952
HOUSE OF COMMONS

Government
Publications

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STANDING COMMITTEE

ON

RAILWAYS, CANALS AND TELEGRAPH LINES .

Chairman: H. B. McCULLOCH, ESQ.)

MINUTES OF PROCEEDINGS AND EVIDENCE

28 reports

No. 1

Bill No. 62 (Letter O of the Senate)
An Act to Incorporate Boundary Pipeline Corporation

FRIDAY, APRIL 4, 1952

WITNESS:

Mr. Robert Herring of The Fish Engineering Corporation, Houston,
Texas.

EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1952



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STANDING COMMITTEE
ON
RAILWAYS, CANALS AND TELEGRAPH LINES

Chairman: H. B. McCulloch, Esq.,
Vice-Chairman: H. P. Cavers, Esq.,

Messrs.

Applewhaite,	Fulton,	Mott,
Beaudry,	Garland,	Murphy,
Bertrand,	Gauthier (<i>Portneuf</i>),	Murray (<i>Cariboo</i>),
Beyerstein,	Gillis,	Mutch,
Bonnier,	Gourd (<i>Chapleau</i>),	Nickle,
Bourget,	Green,	Nixon,
Browne (<i>St. John's West</i>),	Harkness,	Noseworthy,
Cannon,	Harrison,	Pouliot,
Carroll,	Healy,	Richard (<i>St. Maurice-</i>
Carter,	Herridge,	<i>Lafleche</i>),
Casselman,	Higgins,	Riley,
Chevrier,	Hodgson,	Robinson,
Churchill,	James,	Rooney,
Clark,	Lafontaine,	Ross (<i>Hamilton East</i>),
Conacher,	Low,	Shaw,
Darroch,	Macdonald (<i>Edmonton</i>	Stuart (<i>Charlotte</i>),
Dewar,	<i>East</i>),	Thatcher,
Eudes,	MacNaught,	Weaver,
Ferguson,	McGregor,	Whiteside,
Follwell,	McIvor,	Whitman,

A. L. BURGESS,
Clerk of the Committee.

ORDERS OF REFERENCE

TUESDAY, March 18, 1952.

Resolved,—That the following Members do compose the Standing Committee on Railways, Canals and Telegraph Lines:—

Messrs.		
Applewhaite,	Fulton,	Mott,
Beaudry,	Garland,	Murphy,
Bertrand,	Gauthier (<i>Portneuf</i>),	Murray (<i>Cariboo</i>),
Beyerstein,	Gillis,	Mutch,
Bonnier,	Gourd (<i>Chapleau</i>),	Nickle,
Bourget,	Green,	Nixon,
Browne (<i>St. John's West</i>),	Harkness,	Noseworthy,
Cannon,	Harrison,	Pouliot,
Carroll,	Healey,	Richard (<i>St. Maurice-Lafleche</i>),
Carter,	Herridge,	Riley,
Casselman,	Higgins,	Robinson,
Cavers,	Hodgson,	Rooney,
Chevrier,	James,	Ross (<i>Hamilton East</i>),
Churchill,	Lafontaine,	Shaw,
Clark,	Low,	Stuart (<i>Charlotte</i>),
Conacher,	Macdonald (<i>Edmonton East</i>),	Thatcher,
Darroch,	MacNaught,	Weaver,
Dewar,	McCulloch,	Whiteside,
Eudes,	McGregor,	Whitman—60.
Ferguson,	McIvor,	
Follwell,		

(Quorum—20)

Ordered,—That the Standing Committee on Railways, Canals and Telegraph Lines be empowered to examine and inquire into all such matters and things as may be referred to them by the House; and to report from time to time their observations and opinions thereon; with power to send for persons, papers and records.

TUESDAY, April 1, 1952.

Ordered,—That the following Bill be referred to the said Committee:

Bill No. 62 (Letter O of the Senate), intituled: "An Act to incorporate Boundary Pipeline Corporation".

FRIDAY, April 4, 1952.

Ordered,—That the quorum of the said Committee be reduced from 20 to 12 members, and that Standing Order 63 (1) (b) be suspended in relation thereto.

Ordered,—That the said Committee be empowered to print from day to day, such papers and evidence as may be ordered by the Committee, and that Standing Order 64 be suspended in relation thereto.

Attest

LEON J. RAYMOND,
Clerk of the House.

REPORT TO THE HOUSE

FRIDAY, April 4, 1952.

The Standing Committee on Railways, Canals and Telegraph Lines begs leave to present the following as its

FIRST REPORT

Your Committee recommends:

1. That its quorum be reduced from 20 to 12 members, and that Standing Order 63 (1) (b) be suspended in relation thereto;
2. That it be empowered to print from day to day, such papers and evidence as may be ordered by the Committee, and that Standing Order 64 be suspended in relation thereto.

All of which is respectfully submitted.

H. B. McCULLOCH,
Chairman.

MINUTES OF PROCEEDINGS

FRIDAY, April 4, 1952.

The Standing Committee on Railways, Canals and Telegraph Lines met at 11 o'clock a.m., the Chairman, Mr. H. B. McCulloch, presiding.

Members present: Messrs. Applewhaite, Bonnier, Browne (*St. John's West*), Carroll, Carter, Cavers, Dewar, Follwell, Fulton, Gauthier (*Portneuf*), Gourd (*Chapleau*), Green, Herridge, Higgins, Hodgson, Lafontaine, Macdonald (*Edmonton East*), MacNaught, McCulloch, McIvor, Mott, Murray (*Cariboo*), Nickle, Pouliot, Riley, Shaw, Stuart (*Charlotte*), Weaver, Whiteside.

In attendance: Mr. Duncan K. MacTavish, Q.C., Parliamentary Agent; Mr. Robert Herring, representing the Fish Engineering Corporation, Houston, Texas.

On motion of Mr. Carter,—

Resolved,—That Mr. Cavers be Vice-Chairman of the Committee.

On motion of Mr. Applewhaite,—

Resolved,—That the Committee recommend that its quorum be reduced from 20 to 12 members.

On motion of Mr. Cavers,—

Resolved,—That the Committee recommend that it be empowered to print, from day to day, such papers and evidence as may be ordered by the Committee.

The Committee proceeded to consideration of Bill No. 62 (Letter O of the Senate), "An Act to incorporate Boundary Pipeline Corporation".

Mr. MacTavish was called, heard and questioned.

Mr. Herring was called and questioned.


Mr. Herring tabled "Engineering Estimate for Proposed Transmission Facilities from Medicine Hat to Winnipeg".

Mr. Hodgson moved that the Committee adjourn until Tuesday, April 22, at 11 o'clock a.m.

And the question having been put on the said motion, it was negatived.

At 1.05 o'clock p.m. the Committee adjourned until Tuesday, April 8, at 11 o'clock a.m.

A. L. BURGESS,
Clerk of the Committee.



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EVIDENCE

APRIL 4, 1952.

11:00 a.m.

The CHAIRMAN: Gentlemen, we have a quorum. This morning we are to examine Bill O of the Senate, an Act to incorporate Boundary Pipeline Corporation.

I want to refer to our order of reference:

Ordered,—That the Standing Committee on Railways, Canals and Telegraph Lines be empowered to examine and inquire into all such matters and things as may be referred to them by the House; and to report from time to time their observations and opinions thereon; with power to send for persons, papers and records.

Ordered,—That the following Bill be referred to the said Committee:—

Bill No. 62 (Letter O of the Senate), intituled: 'An Act to incorporate Boundary Pipeline Corporation'."

Mr. GREEN: May we have copies of the bill?

The CHAIRMAN: Yes. They will be distributed. Now, I would like to have a motion for the appointment of a vice-chairman.

Mr. CARTER: I would move that Mr. Cavers be appointed our vice-chairman. Motion agreed to.

The CHAIRMAN: I would also like a motion that the quorum be reduced.

Mr. APPLEWHAITE: I would move the quorum be reduced from 20 to 12.

Mr. CAVERS: I would move that the committee have the power to print its minutes of evidence and proceedings from day to day.

Mr. BROWNE: Would it not be better for us to have one motion at a time?

The CHAIRMAN: Yes. Those in favour of reducing the quorum to 12 please signify?

Motion agreed to.

Now I would like to have a motion about the printing of copies of the minutes.

Mr. CAVERS: I would move that the committee be empowered to print from day to day such papers and evidence as may be ordered by the committee.

Motion agreed to.

The CHAIRMAN: We now come to a consideration of Bill No. 62, letter "O" of the Senate, an Act to incorporate Boundary Pipeline Corporation, and I introduce to you Mr. Duncan K. MacTavish, Q.C., parliamentary agent for the promoters.

Mr. Duncan K. MacTavish, Q.C., called:

The WITNESS: Mr. Chairman and honourable gentlemen, I hope I can make my remarks very brief. I will ask the Chairman's permission and your permission to call evidence on matters which you will be interested to hear, more particularly having regard to the route and the ability to finance the project; so my remarks will be introductory and very, very, brief.

I would like to say that this bill is a bill in the form required by the Pipelines Act which was passed by parliament two years ago and, as you gentlemen know, there is a model form of bill provided for under that Act and this bill generally follows that scheme. As with all pipeline bills passed by parliament this bill gives only capacity to the company to do the things indicated in the bill, but it gives no power beyond that. As is the case with all previous bills, there is nothing exclusive or pre-emptive in the bill. The bill, if it goes through, is designed to give capacity to this company to do the things that are stated in the bill can be done; namely to build a pipeline for the transmission of gas. As you gentlemen also very well know this company, before it can do anything in terms either of financing or building or constructing the pipelines must obtain the approval of the Board of Transport Commissioners to the project. As I think you gentlemen also well know there is a most careful investigation made by that body before any leave is given. The fact is, I think, that only in two cases have pipeline companies up to date passed the requirements of the Board of Transport Commissioners.

I think that I should mention also that if there is any question in the minds of any members of this committee as to the adequacy of the limitations in the bill, so far as the main line of the pipe being within Canada is concerned, we are perfectly happy to accept amendment in that regard. The reason that the wording that has been inserted in most bills does not appear in this bill is that some of us who perhaps are a little legalistic with respect to the words which have been used are not all agreed on the meaning; but, in any event, it can be stated here and now that the purpose of this bill is to give capacity to this company to build a pipeline in Canada. I think, gentlemen, that is all I need to say at the moment.

Mr. HODGSON: You are not going outside of Canada?

The WITNESS: No, sir. I think that is all I have to say except to make one comment; that is on the point that may be in the minds of some members here. When we were before the Senate committee our sponsor in that House before that committee indicated in his statement personal view with respect to later subsequent development in terms of barter—to use it in a rough sense—the barter of gas between Canada and the United States. But, he stated, this was his personal views and not given as indicating the views of the promoters in any way. I thought it worth while to mention that here because, as I have stated, the bill as before you, gentlemen, is to provide capacity to the company to build its main line in Canada.

As I say, Mr. Herring, of the engineering side, is here, and I think that with great advantage to the committee he could be heard. We also have Mr. A. I. Matheson of Dominion Securities Corporation, who are interested, or will be interested in the financing of this company; and he will be glad to answer any questions or make any statements on that phase of the matter.

I think, Mr. Chairman, unless there are any questions members feel should be directed to me, that is all I need to say.

Mr. HERRIDGE: Mr. Chairman, I would like to ask a question.

The CHAIRMAN: Yes.

By Mr. Herridge:

Q. Do I understand correctly that the lines of this company are to be entirely within Canada? Is the arrangement that this pipeline is going to be built to a point on the border and then an American company will take it over from there?—A. That would be a possibility, sir; but, as you understand, that would be only possible in the event of there being an exportable surplus of gas in Canada; and I think very recently there was a radio

announcement—yesterday, I believe it was—of a statement emanating from the province of Alberta, which I think puts beyond any reasonable doubt the situation with respect to exportable surplus gas in that province; so I think from that point of view, sir, it is academic. We can go to the border, certainly; that is perfectly true, if there were exportable supplies of gas that we could carry right to that point.

Mr. HIGGINS: And could you supply the United States lines at that point?

The WITNESS: Well, Mr. Chairman and hon. members, might I repeat the statement I made in connection with Mr. Heiring being available to give evidence. Also, we have here for circulation for your examination a booklet giving the whole story. But in brief answer to your question, the line will run from Medicine Hat or thereabouts across the provinces of Alberta, Saskatchewan and Manitoba to Winnipeg.

Mr. McIVOR: May I ask a question? Are you going to stop at Winnipeg? And, have you enough money to go ahead, and enough gas, to go on to Fort William and Port Arthur? Is that going to be possible?

The WITNESS: That is a question which would be better answered by Mr. Herring who will follow me.

By Mr. Green:

Q. Mr. Chairman, rising out of the question just asked by Mr. McIvor, as I read the bill you are not asking any power to build a pipeline in the province of Ontario at all. Is that correct? You are only asking to build in Alberta, Saskatchewan and Manitoba or outside Canada, so that, obviously, it is not the intention of this company to build a pipeline in the provinces of Ontario or Quebec. Is that correct?—A. That is correct, sir.

Q. And if you decide to export gas to the States you would do that by means of an agreement with American subsidiaries. Is that correct?—A. Yes. I think it is fair to say that, yes; I think so. I should not limit that to the term subsidiary. I do not think we would want to accept that sort of limitation. There would be a wide variety of possibilities of what could develop, certainly.

Q. You would have to make a deal either with a subsidiary or with an associate American company, is that correct?—A. Yes, except that I would not like at this point, sir, the plain implication there of limiting us to an associate or subsidiary. We would, if we wanted to do that, do it with someone in the United States—I don't want to quibble about the thing.

Q. No, no; but with some American company?—A. Yes, that is quite right.

Q. Now, Mr. MacTavish, you said that when the Honourable Mr. Wood spoke on the second reading of this bill in the Senate— —A. I was referring, sir, to what he said in committee. He may have said the same sort of thing in the Senate chamber.

Q. You said that he was only speaking for himself?—A. That is right.

Q. Giving his personal opinion?—A. That is right.

Q. Now, I would like to read you from Senate *Hansard* just what he did say on second reading of the bill. This will be found at page 56 of Senate *Hansard*:

As the bill indicates, it is the intention of the company to transport oil and natural gas from Alberta across Saskatchewan and Manitoba, generally in an easterly direction, following the route of the Canadian Pacific Railway, provided, of course, that in the meantime exportable surpluses are not available in Saskatchewan. In such case the pipeline would probably start at the western border of Saskatchewan, pass

through Swift Current, Moose Jaw, Regina, Brandon, and Portage la Prairie to Winnipeg, and thence to the American border, but no further, unless surplus supplies justify the transporting of oil and gas beyond the border. I may say that no decision has been reached as to the point on the American border where the pipeline will end.

Now, do you say that that was an inaccurate presentation of the plans of this company?—A. I would not want to challenge it in any way, Mr. Green; I would prefer to adopt the qualification that the Honourable Senator himself made in committee when he said practically that same thing. But even in the remarks that I made a few moments ago I went almost as far, I think, in answer to a question when I said that, by way of a line, it could be that this company would go to the border.

Q. You say now that it could be that the company would go to the border. Senator Wood said in his evidence quite clearly that it was the intention to go to the border and he made that more certain by saying that he was not sure which point on the border they were aiming at.—A. Yes sir.

Q. There seems to be a difference between your statement this morning and that; it is not just in line with the statement made by Senator Wood.—A. No. I think I might clarify that, Mr. Green, by this one short comment; I think it would be more fair to say that if Senator Wood, speaking at that time, had known what has transpired since in the province of Alberta it is quite likely, I think, that he would have put some qualifying points into his statement, because since that time—I mean, events move very quickly in matters of this kind—in the last few days there has been a pretty definite statement given out by Alberta, quite aside from whatever amount of development there may be in Saskatchewan; and that, I think, is not known, even in terms of forecast yet; there does not appear to be any exportable surplus of gas in that area from which this line starts, sir.

Q. Can I say then that this statement by Senator Wood represents the intention of the company up to the time the Alberta conservation board brought in its findings?—A. I will accept that if it were put in that way.

Q. I am putting it to you in that way now. It is a perfectly straight question and I would appreciate a straight answer.—A. I know it is. I think I should say a word on this. Let us put it this way. If there were an exportable surplus of gas, obviously this company would be happy to make its transmission line available for the purpose of forwarding any exportable surplus.

Q. What you mean then is this, that if you can get permission from the Alberta government for sufficient gas you plan to export it to Minnesota?—A. No. I think that is going further, Mr. Green, than the promoters of this bill intend. I think what they intend, as indicated clearly from the bill, is to obtain capacity from parliament to build themselves a pipeline generally speaking from Medicine Hat to Winnipeg in terms of a main line. They will accept, as indicated, any limitation that this parliament wishes to impose in respect to the main line being exclusively and only in Canada—and it is perhaps futile to forecast too far ahead into the future—if in future there was a situation in which it was in the interests of Canada economically to export gas I would think they would not now wish to accept limitations which might in future prevent them from doing that.

Q. Of course, by saying that the main line would be in Canada; in saying that you are going on the basis that that would not prevent them making a deal with an American company to export gas?—A. Yes, I think that would be a fair thing to say, Mr. Green.

Q. You see, Mr. MacTavish, I believe that there is a very, very broad basis; and that is that Ontario and Quebec are anxious to get gas in quantity, and

apparently, if not surely, they are going to have to rely on the Americans, on some supplemental body or some private body in the United States, to get what they need, and that being the case they will get only what is left after the Americans use what they require. I believe that is the broad issue which figures in this plan and that is why I am so interested in it.—A. Yes, I appreciate that, sir; that is the broad issue, Mr. Green; and if I might venture to comment, I think it is one that in the final analysis must be held down to and solved by the economics of the situation as it develops.

Q. Well, your plans are definitely lined up on the side of making Ontario and Quebec get their gas by some sort of a deal with the United States.

—A. There is recognition, Mr. Green, by many people, I believe, in this industry that the economic situation having regard to a carrier from Manitoba north of the Great Lakes—that there are difficulties there that are obvious to all of us who are familiar with the geography there, and which at the moment make it look economically difficult to bridge that area. Now, that is why I say that I think the economics of the situation are going to be the determining factor in the solution of that problem.

Q. Well, you know that there was a charter granted last year to a company known as Trans-Canada Pipeline Limited?—A. I do, sir.

Q. And that company was to build a natural gas pipeline from Alberta right through Canada to Montreal, serving prairie points, serving towns and cities in northern Ontario—which, by the way, are growing all the time and getting more important—also serving various centres in Ontario and in the province of Quebec, and possibly even down to Quebec City. Now, you realize that there was a company set up in connection with that proposition—A. I realize that, yes.

Q. I am simply asking you whether this is a fair statement of the situation: that your applicants for incorporation are lining themselves up on the other side, and the inevitable result of that would mean that Ontario and Quebec could only get their gas by making some sort of a deal with their United States carriers.—A. I would have to answer that question, gentlemen, in the negative, because—let me put it this way: the company, Boundary Pipelines, as I say, does not take, perhaps the view, that they with their facilities at this time are able to launch a program of the magnitude of the one to which you have just referred; ours is comparatively a modest financial venture; if I may say so, a very modest proposition; and it is designed to serve the provinces of Saskatchewan and Manitoba and that portion of Alberta through which its pipelines will pass.

Q. You are not asking any power to build a pipeline into the province of Ontario?—A. That is correct, sir.

Q. Mr. MacTavish, what is the connection between the applicant's position in the charter and the men behind the Prairie Transmission Lines Limited, which was incorporated in 1950?—A. I would have to point out, Mr. Green, that I do not know about that; it may be that Mr. Herring, on the engineering side, will know about it; but I know of no connection, although there may be one.

Q. Who is behind this present application in addition to the Saskatchewan men who are named in the bill?—A. Again, Sir, I have to answer your question by saying that I do not know.

Q. But could you find out for me?—A. I shall endeavour to do so, sir, yes.

Q. For example, who is Mr. Wilson of Toronto?—A. Mr. Wilson? I think you must have in mind Mr. Wilton.

Q. Mr. Wilton?—A. Yes; he is a solicitor, sir, and in this connection I have acted under his instructions. That is correct.

Q. Would it be asking too much for you to find out just what other people are behind this application, and what connection there would be between this company and Prairie Transmission Lines Limited, which got a charter in 1950?—A. I shall endeavour to do so, sir.

Q. Could you tell us which New York or other American financial house is behind this application?—A. In my opening remarks I said that we have with us here today Mr. Matheson of Dominion Securities which is, as you know, a Canadian company. That is the organization which will do the financing of this company which, as I indicated, in terms of pipe lines companies, is modest. As you know, these pipe line companies deal in very substantial sums of money, but this is a comparatively modest sum in comparison.

Q. What American financial houses are associated with them in this plan?—A. We shall tender Mr. Matheson as a witness. I do not know that. I do know Dominion Securities well, as a Canadian company; but I do not know of any American affiliates.

By Mr. Cavers:

Q. Mr. MacTavish, you mentioned geographical difficulties that would arise between Winnipeg north and Lake Superior. What are the geographical difficulties, and would they present an insurmountable problem in bringing a pipe line to Ontario?—A. Mr. Herring will be able to give you a much more intelligent answer to that question than I can, Mr. Cavers; I must say that I am no expert, but I have been involved in a certain amount of pipe line business, and in conversations which I have had with pipe line people, it seems to me to have been pretty well the consensus of opinion that the long carriage from where there are no large areas to be served is such that, economically, it puts an incredibly heavy load on the financing of the project.

Mr. APPLEWHAITE: Did not the Royal Commission on Transportation say the same thing about the railways?

The WITNESS: In fact that has been said frequently about railways, and it comes up constantly in freight rate problems, that long carriage, with no market reserves creates a great problem.

Mr. CARROLL: Yes, and I think their idea is correct.

The WITNESS: I think so. There is no doubt about it.

Mr. NICKLE: Could you give us any information as to what would be the actual load factor of a pipe line from southern Alberta running as far as Winnipeg. Your submission is based upon a range of load factor of 80 per cent to 100 per cent? Actually, I think the load factor might be considerably lower than 80 per cent, which would result in much higher transmission costs.

The WITNESS: That is a question which I am not qualified to answer, but Mr. Herring, I am sure, can, and he will be following me. I am sorry that I cannot answer your question, but I am just not that good.

By Mr. Higgins:

Q. You said that there does not appear to be an exportable surplus of gas, did you not?—A. There is a statement, although I have not seen it in writing, or in the press; but it has been reported to me as having been given over the radio yesterday, that there was an announcement from Alberta to the effect that generally speaking, you might say, in the southern area of Alberta the Board there has taken the view that there is not an exportable surplus.

Q. In other words, from my point of view, Mr. MacTavish, because I have very little knowledge of the matter, the area you are going to pipe this gas from has no exportable surplus at the present time?—A. According to the most recent statement.

Q. Is that statement from the Alberta government or from where?—A. The statement emanated from the Conservation Board; it has not yet had the imprimatur of the Government of Alberta placed upon it but it has nevertheless been published. I do not know whether it was published in an informal way or simply allowed to be stated. Probably Mr. Nickle knows a great deal more about it than I do.

By Mr. Nickle:

Q. Assuming that gas may not be available from southern Alberta—you are quite correct in saying that the Conservation Board did state yesterday that there is not at the present time an exportable surplus in southern Alberta, but that of course, is at the present time—But assuming that gas could not be obtained from southern Alberta, what area would be your probable source of gas supply?—A. The answer generally, again from a non-technician, would be southern Saskatchewan.

Q. Have you considered the attitude of the Saskatchewan government towards the utilization of its own gas in Saskatchewan for transportation by lines built by the Saskatchewan government?—A. Yes, sir, that has been considered, not that it fell within my terms of reference, but I think that it has been considered by Mr. Herring, on the engineering side, and I believe he has had certain conversations with officials in Saskatchewan.

Q. You say that Mr. Herring will deal with that point?—A. Yes.

Mr. APPLEWHAITE: I wonder if you would allow me to ask Mr. Nickle when he refers to the Alberta Conservation Board and their statement that there is not an exportable surplus, would he make it clear to the committee whether that means "exportable" from the province, or "exportable" from the dominion?

Mr. NICKLE: The Conservative Board in its report tabled by premier Manning a few days ago indicated that in its opinion the present proved reserves in Alberta were 6·8 trillion cubic feet, and that the demands for Alberta over the next 30 years would be 4·3 trillion cubic feet, which leaves a fairly substantial reserve over and above the requirements for the next 30 years; but after carefully surveying the location of the existing reserves, the Conservation Board, in its own wisdom, decided that there is no single reserve in the southern or central portion of Alberta which would justify export at the present time from that part of Alberta either to other provinces or to the United States. The Board did rule that in the Peace River region, a territory of fairly small population with no large local demand for gas, 210 million cubic feet would be made available to West Coast Transmission, on a five year basis, of 42 billion feet a year, which is enough to look after Vancouver. The Board in its report did quite clearly state that its decision is based upon the picture as it exists today, and that it is subject to change as the development of additional resources may warrant. The Peace River area gas now allocated will not be adequate to go into the United States; but again, that picture may change very rapidly.

By Mr. Green:

Q. There is one other question I would like to ask you, Mr. MacTavish. How much money has been spent by the applicants to date in connection with this project?—A. I think I can find that out for you immediately. I am instructed that about \$25,000 has been spent.

Q. You say \$25,000?—A. Yes.

Q. I asked you that question because, in the case of most of the other applicants for a pipe line charter, the applicants had gone to a good deal of expense in having surveys made, and checking routes, and checking markets; and in some cases I think the expenses ran into several hundred thousand dollars. But in this case, you say there has only been about \$25,000 spent?—A. That is correct, sir, and I think that is comparatively consistent with what I have said previously, and when you look at the financial picture. With the possible exception of Canadian Montana, which had a very little Canadian-owned line at the Canadian end of it, this is much the most modest of any of the schemes I have seen in terms of dollars.

Q. But it will cost quite a few million dollars?—A. Yes, but in pipe lines, these figures are astronomical.

Q. To Winnipeg alone this would cost nearly \$30 million.—A. Yes, I think the correct figure is around \$28 million.

By Mr. Carroll:

Q. You mentioned a moment ago that there were two pipe lines for the transportation of gas or oil which got the green light after investigation by the Board of Transport Commissioners?—A. Yes.

Q. So those lines which were incorporated a year or so ago from the west to Montreal have been under consideration by the Board of Transport Commissioners.—A. The two I had in mind are these—and I speak subject to correction, but within my own recollection—the first one was the Interprovincial Pipeline which as you know was sponsored or partially owned by Imperial Oil, and it received parliamentary approval, and it went to the Board of Transport Commissioners. The only other one—and I speak from some knowledge, because we had a watching interest in the matter—was the Canadian Montana one last year, in which case for defence purposes Alberta passed special legislation approving the export of gas. We came to parliament and we got the capacity to build pipe line from southern Alberta to the Montana border and then we went to the Board of Transport Commissioners and the Department of Trade and Commerce and the whole thing was completed. I believe those are the only two which have gone through all the process, and are in operation.

By Mr. Higgins:

Q. Do you plan to carry oil as well as gas in this line?—A. Not in this line. Having heard evidence about it I believe it is not a successful operation to pass both gas and oil through the same line.

Q. Then are you planning to build another pipe line to carry oil?—A. Not at the moment. But if that were done, I believe the economics call for a line being put in the same ditch, but not in the same pipe, so to speak.

Q. Is it being planned now?—A. Not so far as I know.

Q. Your company would be interested in oil?—A. Not so far as I know.

Mr. NICKLE: Has any economic study been made by your group as to the economics of a pipe line terminating at Winnipeg?

The WITNESS: Yes, and Mr. Herring will cover that point in his brief, sir.

The CHAIRMAN: Thank you, Mr. MacTavish. Does the committee now wish to hear Mr. Herring?

Mr. GREEN: Mr. MacTavish will get me the answers to some of my questions?

The CHAIRMAN: Yes, I will see that you get them, Mr. Green.

Mr. MacTAVISH: I have a note of them.

Robert R. Herring, of the Fish Engineering Corporation, Houston, Texas, called:

The WITNESS: Mr. Chairman, and hon. gentlemen: since the presentation of a week or two ago before the Senate committee on Boundary Pipeline application for its charter, as has been mentioned, there have been some developments. I wish to clarify in your minds the motives of the company, the development of this company, and the reason for its application. And I think I can best outline that by giving you the recommendations which my engineering company—with which I am associated—has given.

We have been very active in the Alberta gas picture, both with this company and with the Prairie company, as mentioned by Mr. Green—and may

I pause to qualify our company one step further. We as a company have built three of the major gas pipe lines in the United States, including the Trans-continental Gas Pipeline System from the Mexican border to New York City; the line from Texas to Chicago; and Mr. Fish, President of the company, built, as Vice-president of the company, the Tennessee Gas Transmission Company, which is the largest operating company of its kind in the field today. So our company is qualified in this particular field and we are available on a consulting basis for testimonial work of this nature.

The advice we have given to Mr. Wilton, President of the Boundary Company and his associates in that company, has been, for almost a year now, that Alberta is still lacking in sufficient reserves, based upon their own analysis of their own requirements through the next 30 to 50 year period possibly, for one of these major programs.

The application made before the Alberta Conservation Board was based on a survey showing there was an excess of two trillion cubic feet of natural gas in reserve. The brief is based on a pick-up of 75,000 MCF, that is, 75 million cubic feet of gas per day. And we expect that a pipe line system should operate on 85 per cent load factor, on the basis that there is available steam generating loads to maintain that load factor.

In respect to steam, there is a small pipe line operating in Texas where the load is almost identical, and one large steam generating plant has been maintaining that load factor for us, so we have used it as a parallel with respect to our recommendations here. You will have probably 85 per cent of service with two steam generating stations, on what is known as an interruptible basis.

By Mr. Nickle:

Q. Where are these steam generating plants to be served located?—A. There will be a small one at Swift Current, at Moose Jaw, at Regina, and at Winnipeg.

Q. What would be their volume requirement?—A. As to the volume requirement, I have handed out all my copies; but the volume requirement for our Winnipeg steam generating plant is $3\frac{1}{2}$ million; at Swift Current it would add to the capacity of the pipe line at that point; 8 million at Moose Jaw—I am just giving you this from memory and subject to some correction; and 16 million at Regina; and at Winnipeg, the station is 22 million. Then we have an additional industrial load volume at Winnipeg on an interruptible basis which would supplement that particular station.

Q. What would the industrial load at Winnipeg be? What do you anticipate?—A. The over all design of the company is to offer for re-sale to utilities 50 million per day in the first year of operation. The industrial portion of that, the industrial sales would be 16 million per day, and the balance would be between 85 million operating load and the 50 million a day—I believe that figure is possible from steam generating, but may be on an interruptible basis, as well as from two other industries.

Q. Are these generating plants prepared to take gas on an interruptible basis?—A. At a favourable price, yes, sir.

Q. What price would you say it would be at Winnipeg?—A. Our early assumptions based on early discussions with respect to interruptible price would be approximately 22 cents, which is below the price of competing fuels, and is based on maintaining a constant volume over the interruptible period.

By Mr. Browne:

Q. You say 22 cents. For what?—A. For one thousand cubic feet. And by starting out with a program which would supply Saskatchewan, Manitoba,

and the cities in the southern part of this province, we would come more nearly to meet the present situation in Alberta and we would have a program which could be expanded in the future.

The present economic situation which must necessarily govern our recommendations to Boundary Pipelines has regard to the marketing of Alberta gas. And I quoted from the Alberta records before the Conservation Board of the Trans-Canada Company in their testimony before the Alberta Board, to the effect that they expected to have a price to the market through their system of 50 cents per thousand cubic feet. The analysis which their company made and which we made in eastern Canada is that nearly three quarters of the industrial markets of Canada pay for their fuel a price above 43 to 44 cents. Their price was approximately 6 cents higher than the competitive fuel price of any pipe line of this nature, because the pipe line would be carrying an industrial load during its initial years, and while they are getting people to establish gas in their homes.

Accordingly, our feeling is that there are economics which at the present time preclude the consideration of marketing Alberta gas in eastern Canada. Therefore we have recommended to our client, both because of that and because of the fact of the present reserve situation in Alberta, that they can base their program entirely on this 28 million a day pipe line to serve the provinces at this time.

There is no reason why this particular problem should be further delayed in receiving natural gas by means of a major program from Alberta which could possibly include eastern Canada. I emphasize that with one additional statement: at the present time Saskatchewan is undergoing an extremely active exploration program. In fact they have out there more than 30 rigs in addition to others which will be moving in as soon as the winter has gone.

Therefore, with their present program which looks extremely promising at this time, for gas reserves in that province, the Provincial government is extremely optimistic itself. They are going ahead with their program cautiously, but nevertheless with optimism. So with that development there may be a reserve of gas some 300 to 400 miles nearer to eastern Canadian markets than is the case now, and it may be that there will be a surplus available to transport that gas to eastern Canada which fact would bring the price down to the extent of that 6 cents. That 6 cents represents 100 to 150 million of the 20 year period which the consumers must try to bear. There is no industry to accomplish that. Therefore, in our opinion as an engineering company, until that pipe line can deliver gas at competitive prices, we cannot recommend to any client to consider that project. We have at all times known of the situation in eastern Canada and central Canada, and I should say that there is a possibility of such a pipeline only with a subsidy from the federal government. We have been quite frank in stating that without a subsidy it is not possible. As an engineering company we do not think there is any other way of doing it.

Mr. McIVOR: Then that gives us all the assurance we need that there will be no extension from Winnipeg to Ontario or eastern Canada.

The WITNESS: I could not speak for the company in that regard. My advice to the company would be this—and I think that the Board of Transport Commissioners would be governed by the reports which have been put before them by these companies, and the general feeling is, as I understand it, that to require them to go across northern Ontario in order to carry services to these provinces would be extremely difficult at the present time because of the economic difficulties of constructing a pipeline through that part of the country known as northern Ontario. If, however, it turns out to be economic to go to eastern Canada I have no doubt that some company will go to eastern Canada at that time; I mean, at any time when it is shown to be economical to build a line down there to serve eastern Canada. As things stand at the present

time as an engineering company we would not recommend to any insurance company the investment of the large sums which would be required for the building of such a project. I can only speak from an engineering and economic viewpoint with regard to this pipeline. Now referring back to the situation in Alberta. You see, the present intention is that this pipeline will serve the provinces of Saskatchewan and Manitoba. Their own reserves preclude the export of large quantities from southern Alberta at the present time, but these producers, the producers in that area, are undoubtedly now encouraged by the statement that gas from Peace River sources can now be released. When that additional gas becomes available in the Peace River additional pipelines will be put in operation, and that will be very encouraging for those in southern Alberta, if their program is successful, because that will mean they will have additional gas which they will be allowed to sell as well as their own products there. It is discouraging to delay a project unduly and Alberta has been very much aware of that problem. For instance, the Gulf Oil Corporation own the Pincher Creek field where they have a potential reserve of two trillion cubic feet of recoverable gas, sufficient to serve their customers for a period of 20 years. At the present time the Alberta board have recommended to their government that that field be held in reserve for the province. And now, what are they setting as their requirements? Their forecast is that at peak load that volume of gas would be used up by 1968. And now, that company has some \$6.5 million invested in that field at the present time and the delay until 1968, at 4 per cent, is going to represent a 68 per cent increase in carrying charges in their investment. It is discouraging to an investor to have to sit back and wait until their program for development of a field can be proceeded with. They will be in a much better position as and when additional reserves become available. Our point is that with this company we can initiate at the very earliest moment, either from these reserves in Alberta or from reserves developed in Saskatchewan, a pipeline system to Winnipeg. If the reserves found in Saskatchewan prove to be material this pipeline to go further must extend into the United States at that point; and, if sufficient volume can be developed we will be able to carry that gas to you at Port Arthur and Fort William, if it is sufficient to justify the extension there. It is purely an economic question, as to who the pipeline will actually serve. As a pipeline grows and expands and facilities increase, and if these gas reserves come in in Saskatchewan and Peace River and we can extend this system to eastern Canada, this company will undoubtedly be in the race with all the other companies; but, as I said, it is going to be a very expensive proposition, a very serious investment, to build a line crossing the country north of the Great Lakes, through northern Ontario, to serve the area further east in Ontario and Quebec. We have been very much discouraged by the technical information we have available on it and we have made some investigations, but as pipeliners today we think we can build them anywhere it is worth while. They can be built, but it cost a certain amount of money and that money must be repaid. Gentlemen, that, very briefly, is the recommendation that I have made to our company; that our company, with knowledge of the situation in western Canada, have made to the boundary company. Their program is a relatively small program as pipelines go. It would initiate service to Winnipeg and Saskatchewan and would expand, would make provision for expanding to meet future needs of a larger population.

Whether that develops or not, it is a sound engineering and economical company in its present form. The application to build the pipeline itself will be in the usual form, an application to the Board of Transport Commissioners it will take the usual form. It may be that there will be applications later on with larger reserves available to extend the pipeline service beyond what is at present contemplated, and such an extension will be in order.

By Mr. Whiteside:

Q. You have indicated that the price for this gas would be 22 cents per thousand cubic feet, would that be the same all along the line?—A. No. That is the interruptible sale price. We note that on page 2 of our report. You will see from our report that that will be 85 per cent of the operating load factor, and the average sale price would give us a return of 6.5 per cent on the investment, or 28 cents. The proposed average sale price that we have been discussing with people in western Canada is 30 cents in Winnipeg and 25 cents in Saskatchewan. That would be the wholesale market price delivered to the city gates of the distribution system. We would, of course, sell to the various distribution systems along the line on the same relative terms. What that means is that they must take their consumer deliveries and send them to some customer, with the right to take that back available to them, depending on the average sales in any one year. For instance, the customer signs a contract to take a certain amount of gas during the year; for example, a steam generating unit, or something of that kind. They have the right, the interruptible right, to take it back when it is not needed by such a plant, and when they do that they sell it at 22 cents, which would be a slight loss, but it would still maintain a reasonable flow, or supply of gas, which they are holding available to the customers on this route.

Q. Would you be able to give us an estimate of your annual sales and the possible development say in the next two or three years?—A. It would not be a rapid growth on this pipeline, not the rapid growth that you have seen in other pipelines. The growth per year during 6 years of operation over this line would be 12 to 13 million feet of gas per day.

Q. The growth per year, you say?—A. Yes sir. And now, that growth can be maintained somewhat without increasing these pipeline facilities by use of standard peaking of material; otherwise known as L.P.G., or liquid petroleum gas; so that when we have more customers on this pipeline if additional supplies have not been developed, additional gas can be drawn from these reserves and in that way the flow could be maintained. That is the system which is used where gas is not available in sufficient volume.

By Mr. Nickle:

Q. On page 1, under the heading "Peak Day Sales" you indicate a total average sales per day of 74 million cubic feet. Does that represent your anticipated peak in operation on your pipeline to both industrial and domestic users?—A. Yes, that does.

Q. And you have a total of industrial load to steam generating plants and certain industrial institutions amounting to 66 million cubic feet?—A. Available in the cities served?

Q. Available in the cities served.—A. Right.

Q. At 85 per cent of load capacity you estimate that your average sales would be roughly 63 million feet a day?—A. That is right.

Q. That is on page 2. It would be somewhat less than your industrial load and would run very close to your peak daily load. Could you give us some information as to your probable domestic sales and also your estimate for domestic use?—A. Well, sir, with the exception of 16 million a day, and of 4 millions in Winnipeg—and, again, I cannot give you any very complete information on this market, but on the basis of firm sales—

Q. That would be your industrial load?—A. That is the firm sales. That leaves 34 million a day on a peak day volume required in the second year of operation in domestic and commercial use. That domestic and commercial use will actually operate on about the 28 cent or 29 cent rate, so that the balance

of that particular load would be made up as nearly as possible out of interruptible sales. In order to give you more complete information on that I would prefer, possibly later on this afternoon, to give you any additional details by reference to my notes.

Q. Have you your notes with you here?—A. No, they are down at the hotel.

Q. You could let us have them later on then?—A. Yes sir.

Q. I would like to raise a number of questions dealing with that, getting down to the actual economics of the pipeline.—A. Fine.

Q. Your base or terminal point is Winnipeg?—A. I am not familiar with the order of procedure. Could we have a break for lunch and I could get my notes for you during that time?

Q. I will need some refreshment myself. In the meantime let us go on with other questions here. We have an anticipated expenditure of just over \$28 million. Now, that would be a line of what diameter? Would it be 16 inch or 25 inch? Your main transmission line will be of what diameter?—A. The section of line which we show actually consists on the map—it starts out with 16 inch line—it is 16 inch line all the way.

Q.—All the way?—A. Yes.

Q. What would be the maximum movement over a 16 inch line?—A. With one station of 2,640 horsepower, 75 million a day. That pipeline capacity could be increased by the addition of compressor stations en route, through the 16 inch pipe, by approximately 195 million cubic feet a day.

Q. You could step it up to a peak of 195 million cubic feet?—A. Yes, that is on the basis of 800 pounds operating pressure.

Q. To go beyond 195 million cubic feet a day it would be necessary to lay a duplicate line, would it not?—A. No sir, not entirely. You would begin loading in the station in the low pressure section of the line and you would loop with a 16 inch line.

Q. To what extent could you go by looping to increase capacity before the cost of looping would reach an uneconomic point?—A. It would depend entirely on the amount of market available and the amount of gas we would have available. If we suddenly had a large volume of sale and at the same time an increase in demand; it would take, before this pipeline could be expanded beyond the growth of the system, a large volume of business and reserves—we would undoubtedly use these facilities immediately and would add a lot of new stations, and we could do that without any great difficulty.

Q. That would mean duplicating the investment or laying a parallel line at a considerably higher cost than the initial service?—A. No, sir; I don't agree. To increase the capacity of your pipeline you increase the facilities en route, you have to add additional facilities to serve additional people en route; and during the period you will have amortized back a portion of your investment in this pipeline from the earnings of the pipeline company. That is the theoretical basis on which you would operate; and I understand your public utilities commission follow the same system of depreciating the line. You would, of course, have a part of that depreciation to apply to the construction of any additional facilities you might require up to the point required to meet the demand by the market. If the market goes beyond that demand you could still take advantage of the full capacity of your line. And now, suppose you have additional sales created by this pipeline, and suppose not only demand but reserves become suddenly available in Saskatchewan, let us say for the export of gas, or for taking it down to eastern Canada, and you want to extend your line to bring that gas down to eastern Canada, you would utilize your existing facilities to capacity.

Q. Mr. Herring, I am one of those who have a very strong personal belief in the future of Alberta and I also think that Saskatchewan is going to have very considerable reserves, very large reserves of gas, which are going to be available over the next period of years greatly to expand the export of gas beyond Alberta, I also believe that the gas from Alberta, and perhaps western Saskatchewan, could very well serve all available markets as far east as Montreal. Whether that is done on an exchange basis with the United States or by the construction of a line across Canada is beyond our capacity to say right now. The point I am trying to get at is this: if you build a pipeline of low capacity as far east as Winnipeg, over a 20 year period that line would use approximately 460 billion cubic feet of gas, a small part of the total gas reserves now in sight in Alberta. By the extension of your line southward and by the addition of pressure stations you say you could step up your capacity to 195 million cubic feet a day. From the probable gas reserve standpoint would be piffling. If your line will only carry 195 million cubic feet per day it is going to be necessary to duplicate your pipelines in order to provide facilities for going further into eastern Canada, or into the U.S. Midwest. That will result in the total cost of the pipeline system which will be far higher than if initially a pipeline were built with a diameter of pipe capable of handling 350 million to 400 million of cubic feet of gas per day.—A. I don't agree with you Mr. Nickle, and I think I can show you. I will give you two examples; the Kansas-Nebraska Pipeline Company started out its first pipeline with 6 inch diameter pipe and they were able to deliver 280 million cubic feet. That pipeline company is now delivering some 300 million cubic feet of gas per day, I said 6 inch that is correct. That is one of the major operating companies of some 10 of the major pipeline companies in the states. As far as I know there is only one company in any event, operating with larger sales of gas than that company and that was the Natural Gas Pipeline Company of Chicago. Now, the other example is with regard to the trans-Canada application with a 50 cent price. That price was for every cubic foot of gas sold from that pipeline whether it be 10 miles from the point of origin or whether it be 2,170 miles from the point of origin. We have established a pipeline company which will sell gas at competitive prices to the provinces of Saskatchewan and Manitoba. That is much cheaper gas and will be sold at a price which will serve the market.

Q. Mr. Herring, you are not telling me that trans-Canada pipelines are going to charge the same price in Saskatchewan and Manitoba as they do in Ontario?—A. I am quite sure there is no such intention, but the last figure which I quoted was the figure which they quoted on the stand in testimony; and that was with regard to the amount of money required to operate each year based on the total sales of the pipeline each year, which resulted in the 50 cent price, which is total sales. And now, my point is—if I could add this one thing—that as a pipeline progresses and develops a higher type of market it is going to improve the operating position and it is going to improve very rapidly, say during the first five years, until it becomes a sound operating company about the third year. Having gone through that and developed additional markets in the area it will be in a position to build larger pipeline facilities. I believe that as an engineer, and will say, that if the expansion and demand and available gas is sufficiently substantial there will be nothing in the way of developing a major pipeline at that time. That would be my judgment.

Q. That 85 per cent load factor is based on an average sale price of 27.93 cents. That is the sale price?—A. That is right.

Q. You have an interruptible load price of 22 cents at Winnipeg?—A. That is right.

Q. What is the interruptible load sale price to steam generating plants in Saskatchewan, at Swift Current, Regina and Moose Jaw?—A. May I correct myself there before you go further? That 22 cents is the interruptible price in Saskatchewan.

Q. What would your price be at Winnipeg?—A. We tried to maintain approximately 20 per cent between the average sale price and the interruptible sale price, because of the competitive situation. The proposed rate at Winnipeg is 30 cents, which is slightly below the competitive—30 cents, it is below that, it would be 24 cents for the interruptible price at Winnipeg.

Q. The interruptible price at Winnipeg will be 24 cents and at Saskatchewan points it will be 22 cents?—A. It might be possible at Winnipeg to give a little better price. We could consider that.

Q. What would your peak price be for the domestic consumer?—A. Our peak price would be—

Mr. BROWNE: With all due respect, Mr. Chairman, this is all very technical and many of us do not know very much about it. I wonder if the witness would explain what he means by this expression "interruptible" price.

The WITNESS: That is the price at which the pipeline company will sell to the distributor. That is the wholesale or "gate" price. The load factor is up to the distributing company. Say our price from the pipeline company will be 30 cents to the distributing company, they sell this—again, this is highly technical—they will give a commodity rate to purchasers, which means exactly this: for every 1,000 cubic feet that they fall below the average day take—the peak day average, rather—they are penalized in price by the amount of their drop. When we sign a contract with a customer he agrees to take a certain "load" per day depending on the condition of his market. Let us take the case of a customer who agrees to take 50 million cubic feet per day at the demand price. He has the right to demand that volume each day. For that he pays the demand price. Then if the volume of gas he actually takes exceeds that amount he pays another price; which means that if he takes the full demand volume the year round he pays the 30 cent price; if he takes only half that amount during the year he is penalized by that reduction, the amount of that reduction in the load factor which he tries to maintain.

By Mr. Hodgson:

Q. Why is he penalized?—A. Because he has not been able to take his contract requirement under the demand and commodity rate.

Q. He pays a higher rate, in other words?—A. Yes.

Mr. APPLEWHAITE: In other words he has not taken the peak volume for which he has contracted?

The WITNESS: That is it, he pays on the basis of the peak volume contracted for.

By Mr. Follwell:

Q. I was very much interested in what Mr. Nickle had to say about deliveries at Winnipeg, I wonder if you could tell us what the arrangements are with respect to distribution at other prairie points? Does your company make arrangements for distribution?—A. No sir. As I understand it, there is a discussion going on between the government of Saskatchewan and various cities at this time as to how best to proceed with distribution systems. It will undoubtedly be one of those two agencies; either the city concerned or the government of Saskatchewan.

Q. Would you have to have a guarantee before you supplied service to a given point from your pipeline?—A. Yes, before we would undertake delivery we would have to have a firm contract with some distributing firm.

By Mr. Cavers:

Q. Have you any firm contract for deliveries at the present time? Do you do that?—A. No, sir; our company does not. That has become the practice in western Canada largely today. It is a matter which is considered between the companies involved, and a great deal depends on what Alberta says with regard to the export of gas.

By Mr. Nickle:

Q. Mr. Chairman, getting back to this matter of prices again. What I am trying to arrive at is the means of determining this average sale price of 27·93 cents at the 85 per cent load factor. Using your figures for the interruptible price, I am dealing now with the wholesale price of 22 cents in Saskatchewan and 24 cents in Winnipeg, and the price for domestic consumption of 30 cents at Winnipeg. From your figures on steam generating plants and industrial load, industry is going to receive I would say the biggest percentage of the annual volume going through your pipeline at prices of 22 cents and 24 cents.—A. I am still not making myself clear. We will sell in this pipeline company to the distributing companies who, in turn, will sell to the customers. On the basis of a maintained load factor the price which the pipeline will require will be 25 cents in Saskatchewan, with a full operating load factor, and 30 cents in Winnipeg. Now then, all these sales of interruptible gas will be made by the distributing companies, and the estimates to which you are referring are based upon estimates which have been made of operating costs.

Q. So the operations of your company in Saskatchewan will be framed on a base gate price to the distributor of 25 cents?—A. Yes.

Q. And the wholesale price will be somewhere around 22 cents?—A. For interruptible service.

Q. For interruptible service, and a somewhat higher price for domestic consumers?—A. That is true. In other words, your domestic customer is somewhat penalized for the cost of maintaining stand-by facilities in order to have gas available for heating purposes in the winter time.

Q. I understood you to say that you have your price structure in printed form down at the hotel?—A. Yes sir.

Q. I would like you to bring that with you for our next meeting.—A. I will be glad to bring it.

Q. Now then, getting back to the source of gas again. Granted of course that until the Alberta Conservation Board approves export of gas from southern Alberta, you cannot count on getting gas from that part of the province. Have you, like some of the other pipelines sponsors, made any effort to tie up, or to open up new gas reserves in Alberta; or, have you taken any steps to explore for or develop gas reserves?—A. We have been trying for some months to make a contract with Britalta Petroleum Limited, a company that has large reserves in the Medicine Hat field and from Deep Rock. We think that we are being favourably considered by them, in the event that Alberta does not allow any major volume of gas to move to the Pacific north-west.

Q. Have you completed a contract with them?—A. They signed a contract that calls for a very large volume of gas to pipeline systems which would serve the Washington and Oregon areas. That has been before the Alberta government but there has been no action on it up to May 15. We have been discussing it with them on the basis that if that does not materialize, and we

don't believe it will; then we would like to be in a position to contract on a much smaller basis than what we have in mind here in order to serve cities in the neighbouring provinces.

Q. Have you already made, or do you intend to make any effort to explore or develop the gas reserves of those areas?—A. We know that area. And, to get back to the matter at hand, the Boundary Pipeline Company—our recommendation to them is not to go into a drilling program themselves.

We feel that a pipe line company should be operated on a sound business-like basis, with a certain capitalized investment structure, on which an investor can realize certain earnings, and we believe that the basis of the company should be so established that the consumer may know just what he is going to have to pay for his gas. But if he gets into the drilling business, it is an investment from which the investor does not know how much he can earn.

Q. I realize that a pipe line company does not of itself go into the exploration or drilling for oil; but in this case we already have another company following the same route and hoping to serve the same markets.—A. Yes, but with the exception that it has much larger proposals.

Q. But this company, Western Pipelines, is sponsored by a group which for some years has taken quite an active part in the exploration for and the development of oil and gas in Alberta. Of course, they are already one stage ahead of you, because they are already incorporated.

In comparing the merits of the two proposals for the same route, do you not think that weight should be given to the part played by the sponsors of the pipe line projects in carrying out exploration and development of gas resources?—A. I am going to give you my frank opinion, and I may say that it is only my feeling. But I believe that the pipe line company which proposes to supply the area proposed to be served on the soundest and most economical basis should receive prior consideration with reference to its situation. Further, the Boundary Company, in proposing to serve only Canadian cities in its initial phase, constitutes a project which merits premier consideration. And if the oil fraternity is to be extended to cover a share of it, then I think you have gone too far.

Q. To go into the third alternative for eastward export from the Prairie provinces. The third proposal, which is also already incorporated, is the Trans-Canada Pipeline Company, backed by residents of your home state, Texas, through their operating company, Canadian Delhi Oil. They have spent something in the order of somewhere between \$7 million and \$9 million on exploration for gas, and have made, I think, eight or nine gas discoveries in Alberta. And I believe their volume of gas reserves discovered is something over 600 billion feet, and is intended to serve in part their proposed pipe line into eastern Canadian and the prairie markets which are contemplated to be served by your line. Now, obviously, not more than one pipe line should be built in line with presently available markets either in the prairie provinces or in eastern Canada; and there again we come to the same problem of the weight which should be given to the part played and the moneys spent by the sponsors of Trans-Canada in an effort to develop their project designed to serve Canadian markets.—A. I would not want to discount the Delhi Company at all because they are one of the very finest companies in the United States, and they have been one of the most active companies of gas that we have had in the United States. I think their motive in drilling is to sell the gas. I do not think they should have a monopoly of the pipe line business, which is the marketing of that gas. And I think that if their proposals were identical with ours, it would only be logical to concede all that part of their gas which is under their absolute control, if they have a prior position in the marketing of the product. But my feeling in regard to

the Trans-Canada project is that they ask for 350 million cubic feet of gas per day, and that is not available. But I think there may well be this 75 million cubic feet per day.

As to any other pipe line being built, I would have to point out the problem with respect to Murphy gas of Texas, where we now have nine major pipe line companies. And if we take 75 million of the market going east, we have offset somewhat the economics of a line all the way across to eastern Canada; and at the same time when sufficient volume is available, if the market exists in eastern Canada, the line can be built for that gas to go to eastern Canada without consideration of this matter. But we qualify that to this extent: you have got to find gas nearer to eastern Canada than you have got it today in order to get it there.

Q. You mean at an economical price?—A. Yes.

Q. Or else you have got to have enroute, markets such as Winnipeg, Regina, and Moose Jaw?—A. That won't do it today in our opinion. It seems to me that you are penalizing Regina and Winnipeg, if that is the attitude of the Government of Canada.

Q. I am interested in all the pipe lines and I am trying to bring out the factors relating to all of them than can be used as a guide by this committee in arriving at their conclusions; it seems to me that in planning a pipe line east we must either think "small", which means they only serve the prairie cities as far as Winnipeg, or we must think "large". that is, on a larger scale, and serve the large mid-west United States market, or else the eastern Canadian market?—A. Let us take that point of view. If that is the assumption and if that is the view of the committee for instance, you are basing your whole program for the future on that marketing, on the belief that the gas will be developed.

Q. I believe so.—A. To back up the project. Today we think there is enough gas to serve the southern part of this province today. But in my opinion as an engineer, eastern Canada requires closer reserves.

Q. The closest reserves may be in southern Saskatchewan or even the Williston basin sector of southwestern Manitoba. But you have already suggested that eastern Canada might be taken care of by an exchange of gas with the United States. Can you give us any specific opinion as to whether such a supply of natural gas is available to us from both an economical and a political point of view?—A. We have been very active in the Prairie Company's proposal to transmit gas to the Pacific northwest, one of the two major unsurveyed areas.

By Mr. Green:

Q. You mean the Prairie Transmission line?—A. Oh yes, and we know of the exchange contract signed with respect to the Panhandle and Eastern Pipeline Company which runs across the Detroit river to Windsor, and which makes some summer deliveries. The idea is that if the Board of Transport Commissioners would authorize the production and export of gas from Alberta to the northwest states, and if we agreed to serve the Pacific northwest states with these developments, and it would give them a firm and dependable source of gas for the pipe line which is already in existence to Detroit, in return for which an exchange could be arranged back into eastern Canada, but we think a negotiation of this kind should come from your Board of Transport Commissioners, because they have the gas in Alberta, which is under their jurisdiction for disposal to back up such a program. But if the United States was not agreeable to the program, then Canada could stand by and wait until they could start this project to eastern Canada. I can guarantee that the United States would not turn down gas coming to the Pacific northwest, because they need it for their defence industries.

By Mr. Nickle:

Q. I am dealing now with eastern Canada. In your opinion, is there any reasonable expectation that the various states lying between Ontario and the Mid-continent, the Texas gas producing areas of the United States, and the United States government itself, would be willing to guarantee a long term supply of gas coming to Ontario and Quebec from the mid-continent?—

A. Yes sir. Again, I think we are the outstanding field of the country, but I would like to answer your question.

Q. I take it that your ultimate plan is to run a line south from Winnipeg. There again you would come up with the possibility of serving United States markets and leaving unserved eastern Canadian markets?—A. We presented legal testimony from what we think is the most authoritative source available, the Federal Power Commission, in Alberta, and the statement was to this effect: in approving gas service to New England, the Federal Power Commission of the United States government issued an order in which they stated that in exchange for our supplying facilities to provide for New England, a previously unserved area in the United States, that we should have the right to demand the necessary natural gas in order to supply that area, and that the same condition applies to the Pacific northwest, namely, in order to secure gas for that area, they have full authority to make unqualified delivery of 250 million cubic feet per day, or whatever the exchange is into the provinces of Ontario or Quebec, and once that authority is granted, the Federal Power Commission has been granted that by way of treaty, namely, to export and import gas, by presidential declaration. Therefore, if they get such a declaration, the Board of Transport Commissioners can sit down and meet the conditions.

In our opinion the Federal Power Commission will accept that and make it available, and if it be accepted, it is in the form of a treaty because of the powers granted to it by Congress.

I have heard a great deal of reference as to the undependability on the part of the federal authorities, but I personally would hate to feel that a treaty made on behalf of our government would have no more dependability than that.

Mr. GREEN: They took a long time to get a Saint Lawrence Waterway agreement.

The WITNESS: In our opinion, our people would put up the money to do that job, and there would be no qualifications.

By Mr. Nickle:

Q. Is there a reserve capacity in any existing pipe line from the mid-continent running as far as Michigan, which would be available for the supply of gas to Ontario equal in volume to the gas that will likely be supplied by serving or transporting gas to the Pacific coast area?—A. There is only one other. We have a company which at the present time can make delivery of 250 million cubic feet of gas.

Q. To Ontario?—A. Yes, to Ontario.

Q. Could it guarantee that delivery over a long term?—A. Yes, with the deduction of 25 per cent more reserve of gas than is actually required to make the delivery which is required by the insurance companies today.

Q. Is there any guarantee that such a commitment for a pipe line company to supply 250 million feet of gas per day to Ontario could not be affected by increase in demands by the U.S. states along the pipe line route?—A. Well, it depends on the original order of the Federal Power Commission; and if they pin down delivery of that 250 million feet per day, then no customer has the right to demand that volume. Their intention was to get service for the Pacific northwest, accordingly they would make it unqualified delivery,

assuming that they do so. In our opinion, they could do so and nothing could interrupt that service as long as it was based on this effective and completely unqualified act of the federal parliament.

Q. I would like to have a great deal more information on this matter of exchange.

By Mr. Applewhaite:

Q. Plans are filed at the moment by the Boundary Company. I am not sure to what extent this question of a proposal for a pipe line in Alberta, Saskatchewan and Manitoba is applicable.—A. I do not know whether I can answer that, Mr. Applewhaite.

Q. The over-all question must be whether by allowing you 'to do the business which you have been talking about we are going to spoil the chances of eastern Canada obtaining gas. That I think is a fair question. But whether the details of a possible exchange in the future are really applicable on this hearing, is something I rather doubt. I am not very convinced one way or another, but I do not think that we should go into too much detail as to the legal aspects of the thing in the United States and so on, when we are supposed to deal with an application to incorporate the Boundary Pipeline Company.

Mr. NICKLE: It relates to this extent: that we can be reasonably sure that for some years only one pipe line eastward from the prairies is going to be possible. If the eastward line goes to Winnipeg and stops at that point, or goes south to the United States midwest, the gas will be absorbed by the Boundary Company or any other company building such a line. Then the chances of Ontario and Quebec getting gas from the prairies are going to be somewhat more remote than they are today except by the gas exchange route. For that reason I believe the whole question of gas exchange is something which should properly be considered by this committee.

Mr. APPLEWHAITE: I think that argument is a far step under this application, but I do think this is largely a matter of quantity and I would suggest that we do not get too involved in the American legal aspects, and in their Federal Power Commission and so on, because I think it is largely a matter of quantity.

Mr. NICKLE: The Federal Power Commission and the American government are bound, just as many of our bodies in Canada are bound, by political considerations, and the weight which will be given to political considerations. But I am very much concerned in trying to determine whether or not the exchange of gas is feasible.

Mr. APPLEWHAITE: All we can get from this witness is the opinion of a private transmission company; and if we want to get legal opinions, we would have to call for witnesses from the state department.

By Mr. Green:

Q. This exchange agreement about which you are talking involves Canadian gas going to Washington and Oregon, on the one side and American gas going to Ontario and Quebec on the other side.—A. That is the proposal which we presented to the Alberta government.

Q. That is no longer of any importance because now the Alberta government has no surplus, or rather the Alberta Conservation Board has approved the export of gas from the Peace River district to the west coast, and in view of the fact that Vancouver will be served within that area, this proposal is out of the picture now.—A. The approval from the Peace River was for less than 300 billion of reserves on the present insurance company requirements; 10,000 to one in the way of reserves is the daily delivery. That would be capable of

delivering some 30 million to 40 million cubic feet of gas per day. This pipe line would require to have 250 million cubic feet per day to meet the present northwest markets. It does put the west coast in this position, according to my present information; it does put them in this position. So, in view of this, they are going in and actively drilling, and if they are successful, it will allow them to serve that market. On the other hand, if southern Alberta develops rapidly enough, the other project may well be possible by that time.

Q. Your project was that the Prairie Transmission project were going to take gas from southern Alberta and send it into the United States?—A. That is right.

Q. And now it is proposed to bring gas from the Peace River areas of British Columbia, and send it to the same market, with the exception of Spokane?—A. That is right.

Q. But they have one difference. They have already been granted this right for Ontario, and they are obviously depending on going beyond the British Columbia boundary, the Canadian boundary, to cover Seattle, Tacoma, Portland, but at the same time they refuse to permit any export from southern Alberta, so that is completely out of the picture. And your suggestion is that of an agreement to bring gas into Ontario and Quebec, by giving Washington and Oregon Canadian gas, but simply not on an exchange basis, because Washington and Oregon are going to get their gas under the plan of the West Coast Transmission Company.—A. They still have the problem of acquiring sufficient reserves to meet their commitments for the pipe line; they still have to secure Alberta approval for the development, if the gas is not sufficient for the pipe line project.

Q. Your agreement would wash that out?—A. That is right. And if we had Winnipeg with this company, our recommendation would be: you can secure sufficient gas to go to eastern Canada, if it is close enough and economical for us to market it, and to have natural gas today available on the North American continent, the provinces of Ontario and Quebec would seek it actively.

Q. But your pipe line is not seeking it?—A. No, because it is not economical with the present location of the reserves to serve them.

Mr. LARSON: Might I say, Mr. Chairman, that although I am not a member of this committee, I am sponsoring this bill, and might I say that we in Saskatchewan were very pleased that the people of British Columbia have at last got consent from the province of Alberta to export gas out there. In Saskatchewan also we know that the province of Alberta is ready to take on a terrific amount of responsibility to supply the vast resources of gas which they have.

Now, Saskatchewan is without oil, and so is Manitoba. We have shovelled coal out there for a lot of years, and we have recently got oil at a higher price. So, if you could get gas there in our cities within a reasonable length of time, we would be very pleased, just as the people in British Columbia are pleased to have gotten gas out there.

One of the reasons I allowed my name to go as sponsor to this bill was because I felt that if the people of those two provinces, sister provinces such as British Columbia, could go to the province of Alberta and ask for a modest amount of gas which they think they will give us, they will treat us the same as they have treated other people who are getting it within a year or two. We do not want the privilege of shipping gas to Ontario, or we do not want the privilege of this plan of the continental system, of gas supply; but we would like gas and, as I said, the reason I sponsored this bill was that I felt that in relation to this modest company, there was a good possibility of it, and I felt that these other considerations should probably wait until such time as the gas is available. Therefore, I think that to go into all these things is precluding

the chances of Alberta giving her sister provinces gas within a reasonable amount of time. I would like very much to see this bill go through as is, and then let us see if we can get these difficulties in our sister provinces arranged.

Mr. NICKLE: Do not get me wrong. I am just as keen as you are to see our sister province of Saskatchewan have natural gas; but what I am concerned about is the best means of making the best possible use of the gas reserves of the prairie provinces.

In Saskatchewan, the government of that province has taken a definite stand for government ownership, construction and operation of gas pipe lines. In fact, for the only large gas reserves so far opened up in Saskatchewan, in the general Brock area, the Saskatchewan government, a week or so ago, put up a very interesting proposition to the effect that when and if the developers of the gas in that area can prove established reserves of 200 billion cubic feet, the Saskatchewan government will within one year take delivery of that gas through a pipe line built by the government to Saskatoon, or will start paying the owners of the gas kept in the ground. The only point there, so far as southern Saskatchewan is concerned is this: is the Saskatchewan government willing that any gas reserves in the province be turned over to privately financed pipe lines?

The WITNESS: Is not that a little beyond the field of this committee? How can this company deal with the province of Saskatchewan until they are a company?

Mr. NICKLE: It seems to me that the purpose of this committee is to look at all sides of the problem in connection with every application for the incorporation of pipe line companies, and certainly the attitude of the United States, of Canada, and of the provinces of Canada and so on towards a pipe line, as well as the economics of each individual project, should be presented to this committee, for they are all part of the problem which we have got to solve.

Mr. APPLEWHAITE: I would like to ask one question because I think it would be advisable to have an answer to it, if there is one, in the same record. I wonder if the witness, of his own knowledge, could tell us what would be expected with the reserve situation, to make it possible for the Ontario and Quebec markets to be supplied with Canadian gas?

The WITNESS: I can make only one comment: I cannot foresee that. I do recognize the extreme development of resources during the last three years.

By Mr. Fulton:

Q. You said you could not foresee it. Did you mean that you could not foretell when it would come about, or that you did not think it would ever come about?—A. I am extremely optimistic about developments out there. I think they will grow and grow and grow; but you can only expand your domestic requirements within the province to an extent which matches additional resources; and only last year the government said that there was no surplus. But none the less you do have a sizeable increase in reserves, and with such conditions as Pincher Creek existing, where investors have invested in the field and been told to stay there until 1968, they are somewhat put out. On the other hand, the oil in the Peace River that they will export may encourage a larger program. It depends on how much money they are looking for.

Mr. McIVOR: Mr. Chairman, it is now dinner time.

The CHAIRMAN: Shall we adjourn now until 4.00 today? Provided that the report is passed?

Mr. WHITESIDE: We cannot meet while the House is sitting.

Mr. GREEN: As we have now got the picture of what these people plan, and as we cannot possibly finish this today, and as we have not got any power to sit while the House is sitting, I would suggest, Mr. Chairman, that we postpone the hearing until possibly after Easter when we will have the printed copy of the proceedings, and when these gentlemen will have had an opportunity to provide for us the further information which we have asked for. We can then proceed to clean up the bill. There is no urgency about it because Alberta just yesterday or the day before decided there would be no gas exported to the east—so these people will lose nothing by a delay of a couple of weeks.

Mr. CAVERS: The only objection I see is that Mr. Herring is here from Texas and he would have to come back another time. He probably would not remain over in Ottawa for the period from now until after the Easter vacation; and if his evidence could be heard he would not have to return.

The WITNESS: I would appreciate that very much, because it is quite some distance.

Mr. GREEN: He might be needed here until completion of the bill.

The CHAIRMAN: I am in the hands of the committee. Is it the wish of the committee to meet this afternoon?

Mr. GREEN: You cannot meet while the House is sitting.

The CHAIRMAN: If we have power at that time.

Mr. WHITESIDE: I move that we ask permission to sit while the House is sitting.

The CHAIRMAN: We have had that motion already.

Mr. GREEN: I did not hear what was said.

Mr. BROWNE: Mr. Whiteside moves that we ask power to sit while the House is sitting.

Mr. GREEN: I would not suggest that. It is the beginning of a session and this committee has only got one other bill—it has this bill and the Kitimat railway bill. There is absolutely no need to sit while the House is sitting. You cannot get that permission from the House this afternoon anyway because you must give twenty-four hours notice. I would suggest that we be reasonable about the matter and not try to rush or stampede this bill through; that is not going to help anybody.

Mr. CAVERS: I had no idea of stampeding it through.

Mr. GREEN: It would be far better—

Mr. CARROLL: I would move that we adjourn until 11 o'clock on Monday morning.

Mr. LARSON: Have we finished taking Mr. Herring's evidence?

Mr. GREEN: No.

Mr. HODGSON: Quite a number of the members of this committee live a long way from Ottawa and they have not been home since the start of the session. I feel that some of them will be leaving tonight and that you will have a difficult time getting a quorum on Monday. There is no difficulty here. Aeroplanes are still flying from Texas and our genial friend can come back again. We will probably need him not only for this evidence today but for several days. This thing has just started, I would move that we adjourn until 11 o'clock on April 22.

Mr. CAVERS: There is a motion before the chair.

The CHAIRMAN: There is a motion that we adjourn until Monday morning at 11 o'clock.

Mr. FULTON: There has been an amendment—that the hearing be postponed until the 22nd of April.

The CHAIRMAN: The motion is not amendable.

Mr. NICKLE: I would like to say that I have a number of questions which I would like to ask Mr. Herring dealing with the information he is going to bring forward. Unfortunately, however, I will not be here Monday as I have to make a speech in Toronto about natural gas.

The CHAIRMAN: All those in favour of Mr. Carroll's motion to meet Monday morning?

Mr. GREEN: What about the amendment?

The CHAIRMAN: There is no amendment.

Mr. GREEN: That we sit on the 22nd?

The CHAIRMAN: I do not think that amendment will hold.

Mr. HODGSON: I move my motion as an amendment—that we sit on the 22nd.

Mr. NICKLE: I do not think any of us have any desire to delay passage of or action on this Boundary Pipeline bill indefinitely, but after all there is actually no urgency at the moment in view of the decision reached by the Alberta government a few days ago. Certainly there will not be any change in the Alberta government's attitude over the Easter period.

Mr. GAUTHIER (Portneuf): How do you know?

Mr. NICKLE: We have an election coming up this fall—

Mr. CARROLL: I was only suggesting what I did because we have not the right to sit this afternoon and I was trying to extend some courtesy to our friend here so that he would not have to be delayed until after Easter. It may be that after Monday we can see quite readily that he is not going to be needed here after that time.

The CHAIRMAN: The question is on Mr. Hodgson's amendment that we meet Tuesday April 22, at 11 o'clock. All in favour? Those against?

I declare the amendment lost.

Mr. GREEN: Could we have a poll vote?

Mr. CARROLL: I did not vote at all, but if it is going to be polled I will vote.

Mr. GREEN: I do not really care about a poll vote but I did not vote either. Several of us did not vote at all. Perhaps the chairman will call for a show of hands again.

The CHAIRMAN: All those in favour please stand? Those against?

I declare the motion lost.

Now the question before the committee is whether we meet Monday at 11 o'clock?

Mr. BROWNE: It seems a pity that Mr. Nickle cannot be here, as he is the only expert amongst us.

Some Hon. MEMBERS: Let him stay here then.

Mr. GREEN: It is very unusual procedure to force a committee to sit at 11 o'clock on Monday morning—certainly at this time of the session.

There are many members who cannot be here. If this bill is going to be put through on a stampede basis, of course, nothing can be done about it; but I do suggest that certainly it would be far more reasonable to sit on Tuesday rather than on Monday morning—particularly as Mr. Nickle is not able to be here.

Mr. CARROLL: As far as that is concerned it is all right with me.

The CHAIRMAN: The motion is to sit on Monday morning at 11 o'clock. All those in favour?

Mr. BROWNE: Mr. Chairman—

The CHAIRMAN: The motion is not debatable.

Mr. BROWNE: Can we amend it? It has been amended before—that it be Tuesday morning at 11 o'clock.

Mr. CARROLL: As far as I am concerned it is satisfactory.
Agreed.

The committee adjourned.

